Fuel cell innovator Borup named Electrochemical Society (ECS) Fellow

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LOS ALAMOS, N.M., Sept. 8, 2020—Rod Borup, of Los Alamos National Laboratory's Materials Synthesis and Integrated Devices group, has been named a 2020 Electrochemical Society (ECS) Fellow. The distinction recognizes advanced individual technological contributions in electrochemical and solid-state science and technology and service to the society.

"Rod is one of the Laboratory's distinguished leaders in chemistry and materials as applied to energy applications. His recognition as an Electrochemical Society Fellow is a significant honor that he deeply deserves," said Toni Taylor, associate laboratory director for Physical Sciences.

Borup is the Los Alamos program manager for Fuel Cells and Vehicle Technologies and the Fuels Cells team leader. As director of the Fuel Cell Consortium for Performance and Durability, he leads a multidisciplinary team from five national laboratories dedicated to demonstrating world-class improvements in fuel cell performance and durability, exceeding the 2020 targets set by the US Department of Energy Fuel Cell Technologies Office.

"Being selected as an Electrochemical Society Fellow is such a prestigious honor; this is the primary scientific community and group for us to present our fuel cell-related work, so it is great to be recognized by our scientific peers," Borup said. "The members of ECS also represent my primary networking group where we form our collaborations, which is incredibly important for forming teams to respond to open proposals."

He is also a research professor in the department of chemical and biological engineering at the University of New Mexico. The cost and durability of current polymer electrolyte membrane fuel cells (PEMFCs) are major barriers to their commercial use for stationary or transportation power generation. Borup's research focuses on PEMFCs, including fuel cell component durability, water transport, electrode design, and gas-diffusion-layer materials. His work is funded primarily through the Department of Energy Hydrogen and Fuel Cell Technologies Office.

Borup holds 13 U.S. patents. He has authored more than 150 papers related to fuel cell technology, garnering more than 10,000 citations and an h-index of 39. Borup, who received his doctorate in chemical engineering from the University of Washington, joined the Lab in 1994 as a postdoctoral researcher. His recognitions include a 2016 DOE Fuel Cell Technologies Office Annual Merit Award for Fuel Cells, a 2014 Research Award of the Energy Technology Division of the Electrochemical Society, a U.S. Drive

2012 Tech Team Award for the Fuel Cell Technical Team, and a 2005 DOE Hydrogen Program R&D Award.